

Notice of Allowability

Application No.

10/647,296

Examiner

James C Kerveros

Applicant(s)

MANGELSDORF, STEVEN T.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the present U.S. Application filed 8/26/2003.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 26 August 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This Office Action is in response to the present U.S. Application filed 8/26/2003, which is a continuation application of the U. S. Application 09/510,371, filed February 22, 2000, now US Patent Number 6,671,664, issued December 30, 2003.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

3. In the Specification, on page 1, line 3, after the filing date, the following phrase was inserted: "now US Patent Number 6,671,664, issued December 30, 2003,".

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance:

The prior arts of record taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed invention, as recited in the independent claims below:

Claim 1 includes a method for testing a processor using random code generation, including the steps of generating a random instruction for each data location, executing the random instructions having a random program and which

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produces current values for the data locations, and ***“wherein the current values can be one of committed, uncommitted, and deferred, and further determining a length of the random program, if the random program length equals a desired length, executing a commit V (value) routine, and if the random program length is less than the desired length, repeating the generating, executing, and determining steps”.***

Claim 10 includes a method for testing a central processor unit, including the steps of generating random instructions, executing one or more of the random instructions, which provides current values to data locations, and wherein determining a current state of the central processor unit includes the steps of ***“marking a value as uncommitted if a content is unknown and any desired content may be created by assigning a content to one or more other uncommitted values, marking the value as deferred if the content is unknown, and it is not possible to compute any desired content by assigning the content to one or more other uncommitted values, and marking the value as committed if the content is known.”***

Claim 17 includes a method for testing a processor using a random code generator, including the steps of generating a random program including random instructions, wherein data locations represent one of input values and output values to the random instructions, executing the random program, ***“committing values to desirable values in selected data locations, wherein committed values are produced assigning remaining uncommitted values to arbitrary values, wherein a final state of the processor is defined”.***

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Consequently, independent claims 1, 10 and 17 are allowed over the prior arts of record. Claims 2-9, 11-16 and 18 are directly or indirectly depended upon the independent claims and therefore are also allowable.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Weir et al. (US 5729554) discloses a method for speculative execution of test patterns in a random test generator of a sequence of operations executed by the random test generator (2) illustrated in FIG. 2 flowchart, including the steps of:

Step 202 of determining an initial behavioral model state,

Step 206 of generating a test vector based on the current behavioral model state,

Step 212 the random test generator 2 determines from the current behavioral model state whether the test pattern should be kept. If the test pattern should not be kept, the test pattern is discarded in step 214 and the current behavioral model state of the simulator 3 is reset to the pre-simulation behavioral model state. Steps 206 through 212 are then repeated.

If, however, the test pattern should be kept, the random test generator 2 makes a determination in step 216 of whether another test pattern should be generated.

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However, Weir does not disclose the claimed limitations included in the reasons for allowance above, with the emphasis added.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James C Kerveros whose telephone number is (703) 305-1081. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

U.S. PATENT OFFICE
Examiner's Fax: (703) 746-4461
Email: james.kerveros@uspto.gov

Date: 7 September 2004
Office Action: Allowance

By: 

James C Kerveros
Examiner
Art Unit 2133


SUPERVISOR

SENIOR EXAMINER
CENTER 2100